

Listing of the Claims

1 (Currently Amended). A digital imaging system comprising:

- a. ~~an image sensor₁ and a separate display, wherein a sensing device to which said image sensor is coupled operates independently of a display device to which said separate display is coupled; said separate display being capable of rotating through at least one angle that is independent from the rotation of said image sensor;~~
- b. ~~an image sensor orientation sensor being linked to the image sensor; a display orientation sensor; and~~
- c. a display orientation sensor being physically connected to the display;
- d. an image transfer memory;
- ~~e. an image manipulator, wherein one of the sensing device and the display device includes the image manipulator, which:~~
 - i) receives image sensor orientation;
 - ii) receives display orientation; ~~and~~
 - iii) receives image into the image transfer memory;
 - iii) adjusts the image orientation₁

wherein said image sensor, said display, said image sensor orientation sensor, said display orientation sensor, said image transfer memory and said image manipulator are co-located within a single enclosure.-

2 (Currently Amended). A digital imaging system comprising:

- a. ~~an image sensor for sensing an image subject and to capture a presentation of the image; and a separate display device for displaying said presentation of said image, and a position sensor; wherein a sensing device~~the position sensor ~~to which said image sensor and said display isare coupled to operates independently of said separate display deviceeach other; said separate display being capable of rotating through at least one angle that is independent from the rotation of said image sensor;~~
- b. ~~an image sensor orientation sensor for sensing changes in the orientation of an image with respect to a first image sensor base line orientation coordinates;~~

- ~~and a display orientation sensor for sensing changes in the orientation of said display device with respect to a second display device base line orientation coordinates an image transfer memory; and~~
- c. ~~an image manipulator, wherein one of the sensing device and the separate display device includes the image manipulator, which:~~
- ~~i) receives image sensor orientation from the image sensor orientation position sensor;~~
 - ~~ii) receives display orientation from the display orientation position sensor;~~
 - ~~iii) receives images into the image transfer buffer; and~~
 - ~~iii) adjusts the image orientation in relation to both the image sensor orientation and the display orientation to reconcile said different first and second baseline orientation coordinates the orientation of the position sensor,~~

wherein said image sensor, said display, said position sensor, said image transfer memory and said image manipulator are co-located within a single enclosure.

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3 (Original). The digital imaging system of claim 1 wherein the digital imaging system is chosen from the group consisting of still cameras and video cameras.

4 (Original). The digital imaging system of claim 1 wherein the image sensor is a charge coupled device array.

5 (Previously Presented). The digital imaging system of claim 1 wherein either orientation sensor is chosen from the group consisting of electronic gyroscopic sensors, mechanical gyroscopic sensors, and optical gyroscopic sensors.

6 (Original). The digital imaging sensor of claim 1 wherein the image manipulator comprises an image rotation system.

7 (Currently Amended). A digital camera comprising:

- a. a charge coupled device image sensor;
- b. an orientation sensor that detects the orientation of said charge coupled device image sensor relative to gravity; ~~and~~
- c. means to receive the orientation relative to gravity of a display device capable of displaying the image produced by said charge coupled device image sensor, wherein said display device operates independently of said digital camera;
- d. an image transfer memory; and
- ~~de.~~ at least one image manipulator which:
 - i) receives said charge coupled device image sensor orientation;
 - ii) receives said display device orientation; ~~and~~
 - iii) receives images produced by said charged coupled device image sensor into the image transfer memory; and
 - ~~iv) ii)~~ rotates or transforms the image in the image transfer memory ~~produced by said charged coupled device image sensor~~ to reconcile differences relative to gravity between said orientation of said charge coupled device image sensor and said orientation of said display device, wherein said charge coupled device image sensor, said orientation sensor, said display device, and said image manipulator are co-located within a single enclosure.;

8 (Previously Presented). The digital camera of claim 7 wherein the digital camera is chosen from the group consisting of still cameras and video cameras.

9 (Previously Presented). The digital camera of claim 7 wherein the orientation sensor that detects the orientation of said charge coupled device image sensor is chosen from the group consisting of electronic gyroscopic sensors, mechanical gyroscopic sensors, and optical gyroscopic sensors.

10. (Previously Presented). The digital camera of claim 7, wherein said means to receive the orientation of said display device comprise manual entry means.

11 (Previously Presented). The digital imaging system of either claim 1 or claim 2, in which either of said orientation sensors produce three dimensional orientation information, and in which said three dimensional orientation information from either of said orientation sensors is used by said image manipulator to correct said image for keystone, barrel, perspective and other distortions that result when the image sensor is located off of the perpendicular axis with respect to the plane of the image being sensed.

12 (Previously Presented). The digital camera of system of claim 7, in which said orientation sensor that detects the orientation of said charge coupled device image sensor produces three dimensional orientation information, and in which said three dimensional orientation information is used by said image manipulator to correct said image for keystone, barrel, perspective and other distortions that result when the image sensor is located off of the perpendicular axis with respect to the plane of the image being sensed.

13 (Previously Presented). The digital imaging system of either claim 1 or claim 2, wherein either orientation sensor is chosen from the group consisting of microelectromechanical gyroscopic orientation sensors capable of sensing rotations in two dimensions, microelectromechanical gyroscopic orientation sensors capable of sensing rotations in three dimensions, optical gyroscopic orientation sensors capable of sensing rotations in two dimensions, optical gyroscopic orientation sensors capable of sensing rotations in three dimensions, mechanical gyroscopic orientation sensors capable of sensing rotations in two dimensions, mechanical gyroscopic orientation sensors capable of sensing rotations in three dimensions, pendulum orientation sensors capable of sensing rotation in two dimensions, and pendulum orientation sensors capable of sensing rotation in three dimensions.

14 (Previously Presented). The digital camera of claim 7, wherein said orientation sensor that detects the orientation of said charge coupled device image sensor is chosen from the

group consisting of microelectromechanical gyroscopic orientation sensors capable of sensing rotations in two dimensions, microelectromechanical gyroscopic orientation sensors capable of sensing rotations in three dimensions, optical gyroscopic orientation sensors capable of sensing rotations in two dimensions, optical gyroscopic orientation sensors capable of sensing rotations in three dimensions, mechanical gyroscopic orientation sensors capable of sensing rotations in two dimensions, mechanical gyroscopic orientation sensors capable of sensing rotations in three dimensions, pendulum orientation sensors capable of sensing rotation in two dimensions, and pendulum orientation sensors capable of sensing rotation in three dimensions.

15 (Previously Withdrawn). The device of either claim 1 or claim 2, in which the image sensor is selected from the group consisting of vacuum tubes, vidicon tubes, or plumbicon tubes.

16 (previously Withdrawn). The device of claim 15, in which the image manipulator alters the deflection axis of a scan beam of said vacuum tubes, vidicon tubes or plumbicon tubes in response to said image orientation sensor, thereby adjusting said image orientation.

17. (Withdrawn). A display for an image produced by an image sensor component of a digital imaging system, wherein said image sensor is operates independently of a display device to which said display is coupled, and wherein said display is capable of rotating through at least one angle that is independent from the rotation of said image sensor; said display comprising:

- a. a display orientation sensor;
- b. means to receive the orientation of said image sensor;
- c. an image manipulator which:
 - i) receives said image sensor orientation;
 - ii) receives display orientation; and
 - iii) adjusts the image orientation.

18. (Withdrawn). The display of claim 17, wherein said means to receive the orientation of said image sensor comprise manual entry means.

19 (Previously Presented). The display of claim 17 wherein the display is chosen from the group consisting of mobile displays, cell phone video displays, and liquid crystal displays.

20 (Withdrawn). The display of claim 17 wherein the image manipulator comprises an image rotation system.

21 (Withdrawn). The display of claim 17, in which said orientation sensor that detects the orientation of said display produces three dimensional orientation information, and in which said three dimensional orientation information is used by said image manipulator to correct said image for keystone, barrel, perspective and other distortions that result when the display or image sensor is located off of the perpendicular axis with respect to the plane of the image being sensed.

22 (Withdrawn). The display of claim 17 wherein said display orientation sensor is chosen from the group consisting of electronic gyroscopic sensors, mechanical gyroscopic sensors, and optical gyroscopic sensors.

23 (Withdrawn). The display of claim 17, wherein said display orientation sensor is chosen from the group consisting of microelectromechanical gyroscopic orientation sensors capable of sensing rotations in two dimensions, microelectromechanical gyroscopic orientation sensors capable of sensing rotations in three dimensions, optical gyroscopic orientation sensors capable of sensing rotations in two dimensions, optical gyroscopic orientation sensors capable of sensing rotations in three dimensions, mechanical gyroscopic orientation sensors capable of sensing rotations in two dimensions, mechanical gyroscopic orientation sensors capable of sensing rotations in three dimensions, pendulum orientation sensors capable of sensing rotation in two

dimensions, and pendulum orientation sensors capable of sensing rotation in three dimensions.